

**SCREENING METHODS INVOLVING
THE DETECTION OF SHORT-LIVED PROTEINS**

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ABSTRACT

5 A method is provided for screening for agents that affect protein degradation rates,
the method comprising: taking a library of cells, the cells expressing a fusion protein
comprising a reporter protein and a protein encoded by a sequence from a cDNA library
derived from a sample of cells, the sequence from the cDNA library varying within the
10 cell library; contacting the library of cells with a plurality of agents which may affect
protein degradation rates; for each agent, selecting cells in the library which express short-
lived proteins based on whether the cells have different reporter signal intensities than
other cells in the library, the difference being indicative of the selected cells expressing
shorter lived fusion proteins than the fusion proteins expressed by the other cells in the
15 library; and characterizing the fusion proteins expressed by the selected cells for each
agent.